

TRANSLATION

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>44 803</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/EP2005/000319</b>	International filing date ( <i>day/month/year</i> ) <b>14.01.2005</b>	Priority date ( <i>day/month/year</i> ) <b>14.01.2004</b>
International Patent Classification (IPC) or national classification and IPC <b>G01J3/46</b>		
Applicant <b>DEGUDENT GMBH</b>		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.	
2.	This REPORT consists of a total of <b>4</b> sheets, including this cover sheet.	
3.	This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of <b>8</b> sheets, as follows: <div><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</div> b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s))  _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).	
4.	This report contains indications relating to the following items: <div><input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application</div>	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2005/000319

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 2, 6-14 as originally filed/furnished
- pages\* 1, 3, 3a, 4, 5 received by this Authority on 15.11.2005 with letter of 11.11.2005
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. 10 as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-9 received by this Authority on 15.11.2005 with letter of 11.11.2005
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/4-4/4 as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2005/000319

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																					
1. Statement	<table><tbody><tr><td rowspan="2">Novelty (N)</td><td>Claims</td><td><u>1-9</u></td><td>YES</td></tr><tr><td>Claims</td><td><u></u></td><td>NO</td></tr><tr><td rowspan="2">Inventive step (IS)</td><td>Claims</td><td><u>1-9</u></td><td>YES</td></tr><tr><td>Claims</td><td><u></u></td><td>NO</td></tr><tr><td rowspan="2">Industrial applicability (IA)</td><td>Claims</td><td><u>1-9</u></td><td>YES</td></tr><tr><td>Claims</td><td><u></u></td><td>NO</td></tr></tbody></table>	Novelty (N)	Claims	<u>1-9</u>	YES	Claims	<u></u>	NO	Inventive step (IS)	Claims	<u>1-9</u>	YES	Claims	<u></u>	NO	Industrial applicability (IA)	Claims	<u>1-9</u>	YES	Claims	<u></u>	NO
Novelty (N)	Claims		<u>1-9</u>	YES																		
	Claims	<u></u>	NO																			
Inventive step (IS)	Claims	<u>1-9</u>	YES																			
	Claims	<u></u>	NO																			
Industrial applicability (IA)	Claims	<u>1-9</u>	YES																			
	Claims	<u></u>	NO																			
2. Citations and explanations (Rule 70.7)	<p>Reference is made to the following documents:</p> <p>D1: SHIMADA M ET AL: "Melanin and blood concentration in a human skin model studied by multiple regression analysis: Assessment by Monte Carlo simulation" PHYSICS IN MEDICINE AND BIOLOGY, Vol. 46, No. 9, September 2001 (2001-09), pages 2397-2406, XP002325296 ISSN: 0031-9155</p> <p>D2: US 2003/223060 A1 (GRAF JOHN FREDERICK ET AL) 4 December 2003 (2003-12-04)</p> <p>D3: US-A-5 717 605 (KOMIYA ET AL) 10 February 1998 (1998-02-10)</p> <p>D4: DE 196 52 885 A1 (BASF COATINGS AG, 48165 MUENSTER, DE) 25 June 1998 (1998-06-25)</p> <p>Document D1 is considered the prior art closest to the subject matter of claim 1 and discloses a method for determining the colour effect of dispersive materials, according to the preamble of claim 1.</p> <p>The subject matter of claim 1 thus differs from</p>																					

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	<p>the known method in that a corrected absorption co-efficient is calculated by an additional inverse Monte Carlo simulation based on the remission of the particular material of an optically dense layer.</p> <p>The subject matter of claim 1 is thus novel (PCT Article 33(2)).</p> <p>The present invention can therefore be considered to address the problem of achieving a sufficiently precise determination of the colour effect of the multilayer system. This is of particular significance in the dental industry, since even minimal differences in colour between dentures and natural teeth are discernible.</p> <p>Such a solution is not suggested by the cited prior art. The solution to the problem of interest as proposed in claim 1 of the present application therefore involves an inventive step (PCT Article 33(3)).</p> <p>Claims 2 to 9 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.</p>